Week 5 math

Write ratios in simplest form: show all work

1. Ratio of to 

2. Ratio of 7 dimes to 3 quarters.

Solve the following applications:

3. Marc took 3 hours (h) to mow a lawn while Angelina took 150 minutes (min) to mow the same lawn a week earlier. Write the ratio of Marc’s time to Angelina’s time as a ratio of whole numbers.

Find each rate:

4. 

5. Which is better to buy: 5lb. of sugar for $4.75 or 20lb of sugar for $19.92

Write as a proportion:

6. If Maria hit 8 home runs in 15 softball games, then she should hit 24 home runs in 45 games.

Determine whether each pair of fractions is proportional

7. ? 

Determine if the given rates are equivalent

8. 12 gallons of paint =? 9 gallons of paint

8,329 ft2 1,240 ft2

9. A store has T-shirts on sale at 2 for $5.50. At this rate what do 5 T-shirts cost?

The following table shows the number of calories burned per hour (cal/h) for a variety of activities, where the figures are based on a 150-pound person.

|  |  |  |  |
| --- | --- | --- | --- |
| ***Activity*** | ***Cal/h*** | ***Activity*** | ***Cal/h*** |
| Bicycling 6 mi/h | 240 | Running 10 mi/h | 1,280 |
| Bicycling 12 mi/h | 410 | Swimming 25 yd/min | 275 |
| Cross-country skiing | 700 | Swimming 50 yd/min | 500 |
| Jogging 5mi/h | 740 | Tennis (singles) | 400 |
| Jogging 7 mi/h | 920 | Walking 2 mi/h | 240 |
| Jumping Rope | 750 | Walking 3 mi/h | 320 |
| Running in place | 650 | Walking 4mi/h | 440 |

1. If a person jogs at a rate of mi/h for h in a week, how many calories do they burn?
2. If a person runs in place for 15 mins. How many calories will be burned?
3. If a person cross-country skis for 35 mins. How many calories will be burned?
4. How many hours would a person have to jump rope in order to lose 1 pound? (Assume calorie consumption is just enough to maintain weight, with no activity)

Heavier people burn more calories (for the same activity), and lighter people burn fewer. You can calculate similar figures for burning calories by setting up the appropriate proportion.

1. At what rate would a 120-pound person burn calories while bicycling at 12 mi/h?
2. At what rate would a 180-pound person burn calories while bicycling at 12 mi/h?
3. How many hours of jogging at  would be needed for a 200-pound person to lose 5 pounds? (Again, assume calorie consumption is just enough to maintain weight, with no activity.)